

Title (en)  
Spark plug

Title (de)  
Zündkerze

Title (fr)  
Bougie d'allumage

Publication  
**EP 1102373 A3 20030514 (EN)**

Application  
**EP 00310115 A 20001114**

Priority  
JP 32505799 A 19991116

Abstract (en)  
[origin: EP1102373A2] A spark plug includes a metallic shell (5) having a stepped portion (5c); an insulator (3) disposed inside the metallic shell (5), while being engaged with the stepped portion (5c) of the metallic shell (5), and having an axially extending through-hole (3d); a center electrode (2) fixed within the through-hole (3d) of the insulator (3); and a ground electrode (4) having a tip end portion (4a) bent toward the center electrode (2) to thereby form a spark discharge gap (g). The insulator (3) is formed such that the outer diameter of the insulator (3) decreases toward the tip end side from an engagement position at which the insulator (3) engages the stepped portion (5c) and such that the diameter decreases stepwise at an axial position between the engagement position and the tip end of the insulator (3). The diameter reduction ratio  $Y1 = D1/d1$  is 0.6 or less in a region of at least 2 mm extending from the tip end surface (3b) of the insulator (3) toward the base end side, wherein D1 represents the outer diameter of the insulator (3) measured at an arbitrarily determined axial position, and d1 represents the inner diameter of the tip end portion (5a) of the metallic shell (5). Further, a clearance ratio  $Y2 = (d1-D1)/d1$  is 0.4 or greater in a region of at least 1 mm extending from the tip end surface (5b) of the metallic shell (5) toward the base end side. <IMAGE>

IPC 1-7  
**H01T 13/46**; **H01T 13/20**

IPC 8 full level  
**H01T 13/20** (2006.01); **H01T 13/46** (2006.01); **H01T 13/52** (2006.01)

CPC (source: EP US)  
**H01T 13/20** (2013.01 - EP US); **H01T 13/467** (2013.01 - EP US)

Citation (search report)

- [A] EP 0872927 A2 19981021 - NGK SPARK PLUG CO [JP]
- [A] EP 0863591 A1 19980909 - NGK SPARK PLUG CO [JP]
- [A] EP 0812043 A1 19971210 - NGK SPARK PLUG CO [JP]
- [A] EP 0899840 A1 19990303 - NGK SPARK PLUG CO [JP]

Cited by  
EP2216862A4

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DOCDB simple family (publication)  
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DOCDB simple family (application)  
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